Submission to The Joint Standing Committee on Treaties

Inquiry into the Kyoto Protocol

by:

The Sustainable Energy Industry Association

(Australia) Ltd

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217 Northbourne Ave
Turner ACT 2612

Telephone: 02 6230 0271
Fax: 02 6230 0273
Email: seia@seia.com.au

Introduction

The Sustainable Energy Industry Association represents over 200 companies within the sustainable energy industry. This industry is growing rapidly, and is a strategically important part of Australia's future. For example, Solahart, a manufacturer of solar hot water services, now employs as many people as does the BP Kwinana oil refinery, while the insulation industry employs several thousand people.

This submission specifically addresses the Terms of Reference of the Inquiry, and also includes a number of attachments of relevance, which include material submitted to a number of other inquiries.

Implications of ratifying or not ratifying the Kyoto Protocol

The implications of ratification (or non-ratification) of the Kyoto Protocol are broad. To a great extent, the implications depend upon assessment of the likely scale of greenhouse response that will be necessary, and whether this is likely to occur under the Kyoto Protocol or under some other framework that might replace it.

SEIA is convinced that global warming is a serious problem, and that efforts to address it will accelerate over time (see below). On this basis, we consider that if the Kyoto Protocol fails, alternative mechanisms will emerge to replace it. These may include unilateral action by some countries or blocs of countries (which may have serious implications for Australian trade) or a replacement international agreement.

The benefits for Australia of ratification include:

- Australia's negotiating position with regard to inclusion of sinks at COP 6 would be improved by a commitment to ratify. This would be an important sign to the world community that Australia was genuine in its approach to the Kyoto Protocol. Without such a signal there is a real possibility that the excellent work done by Australian scientists on measurement of sinks will be ignored, and Australia's task in meeting its Kyoto obligations (or obligations under a replacement framework) could become more difficult. As Senator Hill pointed out at an Emissions Trading conference earlier this year, no agreement that replaces the Kyoto Protocol is likely to be as generous to Australia.
- Progress on greenhouse response will continue in a coordinated and orderly manner. If the Kyoto Protocol fails, there would be scope for individual countries and blocs of countries to act independently on global warming. Their actions could include trade restrictions or other actions that impact disproportionately on Australia, or even the use of global warming as the façade behind which actions with other motivations are pursued. Further, failure of international processes could lead to a variety of responses within countries by groups concerned about the consequences of global warming: this could have significant political implications within countries, including Australia. For example, if farmers become convinced that they face longer and more frequent droughts and other climate-related impacts, or their exports come under threat from barriers introduced by customer countries, the rural lobby could apply significant political and social pressure for response and assistance to adapt.
- Australian business will be able to act within a framework of greater certainty. Many major Australian businesses have been convinced that action on global warming is inevitable, regardless of scientific uncertainties that some believe still exist, and their analysis has shown that they have scope for constructive response. However, uncertainty seriously undermines commitment to action. While ratification of Kyoto will not be sufficient to overcome all uncertainties, it will be an important step forward, as it will reinforce the international processes and provide support for development of local implementation rules and guidelines.
- Ratification will provide a rationale for early action by governments to reduce uncertainty by announcing more specific greenhouse response frameworks, as there will be clearly accepted targets and ground rules. Without this international context, sectional interest groups will continue to argue for arrangements that advantage them at the expense of others.

- SEIA is convinced that ratification and consequent early action will facilitate more rapid adoption of many cost-effective greenhouse response opportunities such as those offered by sustainable energy technologies and services. These will enhance Australian economic development and in particular employment. At present, lack of certainty and lack of focus on cost-effective opportunities for emission reduction are impeding progress on emission reduction
- Early action on greenhouse response will be important for the strategic positioning of the Australian economy. It seems increasingly likely that longer term efforts to limit greenhouse gas emissions will involve action much stronger than that proposed under the Kyoto Protocol. Countries that position themselves to capture low emission development opportunities and build industries that supply solutions for emission reduction will gain advantage. Australia's industry development strategies of the past few decades would, if continued, leave us disadvantaged in a post-Kyoto world.

The difficulties and potential risks for Australia from early ratification of the Kyoto Protocol include:

- Difficulties for Australian exporters and import replacement industries that have to compete with suppliers from non-Annex B countries – but only where our Kyoto obligations lead to higher costs for the Australian businesses. It is unfortunate that most Australian business has made the assumption that compliance with Kyoto will increase business costs. This has been shown to be incorrect for many Australian businesses across a range of sectors. For example, MIM has reduced its greenhouse gas emissions per unit of output by around 50% since 1990. Participants in the NSW Sustainable Energy Development Authority's Energy Smart Business program are saving millions of dollars at internal rates of return of 40% per annum or better. Transfer of cement production from the old 'wet' process to the 'dry' process has halved energy consumption per tonne, while blending blast furnace slag and fly ash with cement (a strategy just emerging) can again halve energy consumption per tonne of cement. A pro-active approach could well mean that most Australian business can gain advantage from compliance with the Kyoto obligation. For those few industries that are disadvantaged, there is case for assistance of various forms: this could be funded from revenue from sale of emission permits or carbon levies applied to the rest of the economy
- There may be pressures for some industry sectors to revise their long term strategies. However, these changes are likely to occur regardless of progress with the Kyoto Protocol. For example, if long term reductions in greenhouse gas emissions are necessary, aluminium smelters that rely on coal-fired electricity will be disadvantaged relative to those who use low greenhouse impact energy sources, and this will be factored into global development strategies. However, the Australian aluminium industry is well-placed to meet its share of the responsibility for compliance with Kyoto. Reductions in PFC emissions since 1990 have reduced smelting emissions per tonne of product by up to 15%, and recently announced technologies have potential to cost-effectively reduce emissions per tonne of product by a further 35% before 2008 (Credit Suisse First Boston Corp, 2000). These technologies (inert anodes and wettable cathodes) can be retrofitted to existing smelters. It should be noted that the long term prognosis for Australia's bauxite and alumina refining industry (the most profitable areas) under a greenhouse response scenario is good, because they are very efficient by world standards, use mostly low greenhouse impact natural gas, and have access to excellent solar energy resources because of their locations. Since alumina refining requires large amounts of low grade heat, there is long term potential for the Australian alumina industry to utilise renewable energy once emissions trading schemes are operating.
- There may be threats that some industries will move plants to non-Annex B countries, to avoid compliance requirements. This concern is often overstated. The cost of new plants must be recovered over an extended period and, since it will be necessary for all countries to contribute to emission reduction within the foreseeable future, such investments are quite risky – unless they achieve lower greenhouse gas emissions, which would be a good global outcome anyway. International companies are also under increasing pressure to be good global citizens, so such action could attract severe public criticism and adversely affect business outcomes. There is some potential for a shift in production to existing plants in non-

Annex B countries, however, this could be avoided if rebates, assistance for energy efficiency improvement or fuel switching or other mechanisms were used to offset any cost impacts of greenhouse response for locally based plants competing with others in non-Annex B countries

- Transition issues. Particularly where the arrangements under the Kyoto Protocol differ from likely longer term global frameworks for management of greenhouse gas emissions, there may be circumstances where actions that are globally sensible do not sit comfortably within the Kyoto arrangements. This is an area where effective leadership and management by government are needed. Where an industry can demonstrate that, on a global level, they are reducing net emissions despite generating emissions in Australia, there is a case for government to assist them over the short term, until appropriate global frameworks are put in place.

As SEIA pointed out in its recent submission to the Senate Inquiry on Global Warming (see attached), even ABARE's conservative modelling of the economic impact of greenhouse response in the lead-up to Kyoto showed that over 85% of Australian business activity would either not be adversely affected or would benefit from application of carbon taxes, even at relatively high levels. And we now know that most the industry sectors ABARE expected to be adversely affected have already identified opportunities for cost-effective emission reduction. Further, ABARE's modellers admitted at a recent Round Table organised by the Senate Inquiry into Global Warming (16 August 2000), at which SEIA was represented, that their cost estimates are now much reduced relative to the response costs presented in their pre-Kyoto reports.

The Veracity of the Science of Climate Change

SEIA is convinced that climate change is occurring, and that human activity is a major contributor.

In discussing the science of climate change, it is useful to separate a number of issues:

- There is no doubt that the concentrations of greenhouse gases in the earth's atmosphere are increasing rapidly. In the case of carbon dioxide, the concentration is now significantly higher than it has been for over 400,000 years and more than 30% higher than pre-industrial levels
- The increase in greenhouse gas concentrations is consistent with the release of large amounts of carbon in fossil fuels: creation of these fossil fuels stored carbon over millions of years, and this carbon is now being released over a period of hundreds of years. It is also consistent with human intervention with vegetation through landclearing.
- There is no doubt that, all other things being equal, an increase in the concentration of greenhouse gases in the atmosphere will lead to global warming: this is very basic physics
- There is debate about the extent to which feedback systems, lags and other factors may delay, slow, accelerate or amplify the base level of global warming – but the balance of scientific opinion is that significant warming is already occurring and will continue. A wealth of data, including observed warming of ocean depths, the appearance of open sea at the north pole, and increasing intensity and frequency of storms, supports the view that warming is occurring.
- There is uncertainty as to the regional impacts of global warming – but higher peak rainfall events and more powerful storms, changes in rainfall patterns, warmer nights, etc are expected, and are occurring.
- There is uncertainty about the extent of the impacts of global warming on humans, economies and ecological systems – but the greater the warming, the more serious these impacts will be.

It must be recognised that we are at present carrying out a global scale experiment, changing the concentrations of greenhouse gases at rapid rates. It is prudent for humans to change their actions to limit increases in concentrations of greenhouse gases in the atmosphere. To limit concentrations to two or three times pre-industrial levels will involve large reductions in rates of emission, far beyond those proposed under the Kyoto Protocol. The Kyoto Protocol must therefore be seen very much as a first step in global response to global warming, rather than as an end-point.

It is often argued that the possible future costs and impacts of contributing to greater global warming must be balanced against the costs and impacts of response. It is here that most Australian policy analysis has failed us.

First, economic studies have placed a value of zero on the cost of the impacts of ongoing global warming. According to ABARE's economic modellers (Senate Inquiry Round Table, 16 August 2000), this is because they have not been able to find good quality estimates. But lack of certainty of the costs of global warming does not justify setting the cost to zero. For example, the cost of one year's drought to the Australian economy is in the billions of dollars: the impact of more frequent droughts can therefore be roughly costed. Likewise, the cost of damage done in a recent Sydney hailstorm is known, so the cost of an increasing number of such events can be roughly estimated. Studies should at least incorporate a range of possible impact costs.

Second, economic modelling has generally assumed that there is little scope for cheap emission reduction. This shows ignorance of the potential of technological innovation and sustainable energy solutions. SEIA and others have documented many cases of *negative cost* greenhouse response actions. For example, a recent costing of the national appliance energy efficiency program estimated the cost of carbon dioxide avoided at $-31/tonne of CO_2 (Aust Energy News, 2000). Yes, avoiding a tonne of emissions through this program saved $31. As noted above, MIM, the aluminium industry and many others have also found cost-effective (ie negative or zero net cost) emission reduction opportunities.

In its economic modelling, ABARE has assumed that Australia will improve its energy intensity at a rate of 1.1% per annum, slightly better than its historical rate. That is, our energy intensity will improve at this rate at zero cost. Any acceleration of the reduction of energy or greenhouse intensity beyond this rate will incur costs in their modelling. Recent US studies have suggested that a zero net cost rate of improvement in energy intensity of 2.3% pa could be achieved by appropriate technology innovation policies and, under these scenarios, greenhouse response can actually improves economic output – that is, increases GDP above 'business as usual' (Laitner, 1999). It is disappointing that Australian economic modellers have failed to explore such scenarios here.

SEIA recognises that if one believes that greenhouse response will seriously damage the economy, one would be reluctant to pursue it. But we simply do not understand why Australian government and businesses are reluctant to pursue opportunities to save money and expand new markets through greenhouse response action. The only explanation we can find is that business views have been unduly influenced by distorted and limited economic modelling, and by loud protestations from the small number of industries that may suffer under a greenhouse response scenario. It is our observation that, as business looks more closely at its own circumstances, these fears are dissipating. Further, in some cases it seems that businesses have been using anti-greenhouse campaigns as a smokescreen to fool their competitors while they have been repositioning their businesses to profit from greenhouse response.

Definitions and criteria with regard to grandfathering, trading credits etc

These issues relate to the management of transition towards incorporation of the full costs of greenhouse gas emissions, and the comprehensiveness of emission trading schemes.

Grandfathering is one way of limiting the impact of introduction of emissions trading (or carbon taxes) on existing emitters. However, this approach adversely affects new industries, and dilutes the signals sent to existing emitters. It would be more constructive to address the broad issue of transition, and to consider the full range of options in managing it. These issues will be discussed below.

Economic, environmental and social implications of a punitive approach to emission control

The use of the term 'punitive' in the Terms of Reference is emotive, and has negative connotations that could equally be applied to many other government policies involving taxation, maintenance of law and order, regulation of business activity and so on. The reality is that all strategies that address global

warming (and those that ignore it) will have economic, environmental and social impacts. These impacts will be both positive and negative for different groups within society.

The options of carbon taxes and incentive-based action are discussed below.

Managing transition to a low carbon economy

There seems to be little disagreement that reduction of greenhouse gas emissions would be managed most cost-effectively via an emissions trading framework that includes the full range of emissions and sinks. However, there are many views on how best to arrive at this situation, and how to manage the impacts on existing business and communities. It is also clear that the practical limitations of emissions trading, such as transaction costs and market structures, mean that many small emitters and agents that influence the emissions of others will not be directly included in an emissions trading scheme. For example, the building industry strongly influences lifecycle building energy emissions, but does not pay ongoing energy bills, and is unlikely to see strong signals from emissions trading (see SEIA's Senate Inquiry submission, attached).

A key issue is that business action is now constrained by uncertainty. It is important that government acts now to reduce this uncertainty. One approach, outlined recently in the Allen Consulting Group's report to the Victorian government (Allen Consulting, 2000) would be to pursue a comprehensive approach including voluntary and regulatory measures as well as economic instruments. This could include a small carbon tax that would, over time, be replaced by emissions trading. The logic behind this approach is that the market price of emission permits in the early stages of a market may be very volatile, and may be higher than in the longer term, so that a carbon tax would provide a more stable introductory step. Industries with special difficulties could receive rebates or other assistance during the transition period. These rebates could be linked to action to improve energy efficiency or other actions, and some revenue could also be used to assist communities impacted by change, and to fund financial incentives for greenhouse response. Some of the income could also be used to promote employment by reducing existing taxes on labour, such as payroll tax, to encourage increased business activity.

SEIA does not have a strong view on the exact form actions should take. The priority is for prompt action using flexible strategies that can soften the impacts on those who might otherwise suffer but provides clear signals to those who have the capacity to act. SEIA's 'Reverse Carbon Tax' proposal (attached) provides one option for encouraging cost-effective action.

Conclusion

There is a strong case for Australia to ratify the Kyoto Protocol, and for government to pursue early action to reduce uncertainty for Australian business. A pragmatic and flexible approach using a mix of economic instruments, regulation and financial incentives is most likely to facilitate cost-effective greenhouse response.

References

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